

INFORMATION SHEET

Background

The City of Orland owns and operates a wastewater treatment facility that accepts domestic wastewater from the City of Orland and industrial wastewater from two olive processors and a nut processor. Domestic wastewater and industrial wastewater are processed separately. The domestic waste facility consists of four unlined stabilization ponds and an adjacent 44-acre irrigation field. The average domestic wastewater flow to the stabilization ponds is 1.0 million gallons per day. Approximately 1.5 million gallons of wastewater from the stabilization ponds are transferred to the irrigation field 1 to 2 times per week. The industrial waste facility consists of two lined evaporation ponds covering 5.3 acres, and receives an average of 2.5 million gallons per year. The industrial wastewater ponds are designed in accordance with Title 27, California Code of Regulations Class II standards.

Prior to the construction of the Class II surface impoundments, a release of waste from the original industrial wastewater ponds to groundwater occurred. Soils underlying the facility are highly permeable. The discharger implemented a corrective action program in 1995, which consisted of installation of an additional layer of synthetic liner in the industrial ponds to Class II standards. The magnitude and extent of pollution is not defined. Groundwater monitoring indicates that the direction of flow is east to west/southwest at a gradient of no more than 0.02 feet per foot, and that since installation of the dual liner system, concentrations of salts in groundwater have exhibited a decreasing trend.

Groundwater Conditions

The current ground water monitoring network consists of 12 monitoring wells, and at least 5 private domestic and/or irrigation wells. Each well is monitored annually, and only wells W-A through W-G are sampled quarterly. The initial groundwater monitoring network consisted of W-A through W-E, W-1 through W-4, and domestic and/or irrigation wells W-5 (upgradient - Vlasoff), W-6, W-7 (Barceloux), W-8 (Fortini), and W-9 (Cemetery). Order No. 96-129 required the Discharger to submit a Groundwater Monitoring Program, allowing the existing monitoring network to be incorporated into the proposal. The City included additional private wells, and monitoring wells W-F, W-G, and W-H to the monitoring program. Currently, W-E, W-G, W-2, W-3, and W-4 are reported consistently as dry, and W-H, W-7, and W-10 are no longer in use due to pump age and/or failure.

The current groundwater monitoring network does not adequately evaluate the extent of pollution, and does not include a detection monitoring network for the wastewater stabilization ponds and irrigation fields.

- Monitoring data indicates that groundwater is influenced by releasing treated wastewater to the irrigation field. In the Fourth Quarter 2009 Monitoring

Report, the City of Orland presents that: "The direction of groundwater flow was not determined this quarter because the water table was influenced by the release of treated wastewater from the domestic ponds into the percolation fields."

- Secondly, although, monitoring wells W-A through W-E appear to be representative of the same water bearing unit, the construction specifications of the remaining wells are unknown, including the current background monitoring well, W-5, which is a private well, and therefore may not be representative of the downgradient groundwater zone of influence.
- Additionally, monitoring wells W-E, W-G, W-2, W-3, and W-4 are consistently dry. During the fourth quarter of 2009, water samples were not retrieved from wells W-E and W-G, and W-2, W-3, and W-4, due to low water levels.

The Discharger is required to install a new upgradient monitoring well, and submit a work plan to amend the current groundwater monitoring network.

Basin Plan, Beneficial Uses, and Water Quality Objectives

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. The beneficial uses of the underlying groundwater are domestic and agricultural supply.

Title 27

Title 27, CCR, section 20005 et seq. (Title 27) contains regulations to address certain discharges to land. Title 27 establishes a waste classification system, specifies siting and construction standards for full containment of classified waste, requires monitoring of groundwater and the unsaturated zone for any indication of failure of containment, and specifies closure and post-closure maintenance requirements. Generally, no degradation of groundwater quality by any waste constituent in a classified waste is acceptable under Title 27 regulations.

Discharges of domestic sewage and treated effluent can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater. For this reason, they have been conditionally exempted from Title 27. Treatment and storage facilities for sludge that are part of the WWTF are considered exempt from Title 27 under section 20090(a), provided that the facilities not result in a violation of any water quality objective. However, residual sludge that will not be subjected to further treatment by the WWTF is not exempt from Title 27. Solid waste (e.g., grit and screenings) that results from treatment

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of domestic sewage and industrial waste also is not exempt from Title 27. This residual sludge and solid waste are subject to the provisions of Title 27.

Discharge Prohibitions, Specifications and Provisions

The Discharger's water balance capacity analysis indicates that the WWTP has the following capacities:

Condition	Capacity
Average daily dry weather flow ¹	2.1 mgd
Total annual flow to the domestic ponds	756 MG
Total annual flow to the industrial ponds	2.5 MG

¹ Based on the months of June through September, inclusive.

The effluent limits for TDS of 650 mg/L monthly average and 900 mg/L daily maximum are based on reasonable expectations of performance of the secondary treatment system.

The Monitoring and Reporting Program is designed to verify compliance with effluent limitations and operational requirements of the WDRs.